



REPORT  
OF THE  
AGRICULTURAL DEPARTMENT  
DOMINICA  
1939.

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Price Sixpence.







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# STAFF OF THE AGRICULTURAL DEPARTMENT, DOMINICA.

|                                            |                                                                         |
|--------------------------------------------|-------------------------------------------------------------------------|
| F. G. HARCOURT, M.B.E., F.R.H.S. (1)       | Agricultural Superintendent and<br>Curator, Botanic Gardens.            |
| H. B. PIDDUCK, N.D.A., N.D.D., (Hons.) (2) | Assistant Agricultural Officer and<br>Manager, Government Fruit<br>Farm |
| L. A. ROBERTS .. .. .                      | Clerk.                                                                  |
| G. J. STEDMAN .. .. .                      | Peasants' Adviser.                                                      |
| H. C. BURTON .. .. .                       | Foreman, Botanic Gardens.                                               |
| A. C. WINSTON .. .. .                      | Foreman, Government Fruit<br>Farm.                                      |

## GOVERNMENT MARKETING DEPOT & COLD STORAGE.

|                           |                              |
|---------------------------|------------------------------|
| G. A. WINSTON (3) .. .. . | Officer-in-Charge.           |
| F. P. E. DUPIGNY .. .. .  | Clerk.                       |
| J. J. McDOWELL .. .. .    | Foreman and Fruit Inspector. |
| E. A. TROTTER .. .. .     | Foreman, Engine Driver.      |

- (1) Acting Commissioner of Montserrat from 16th April to 10th December.
- (2) Acting Agricultural Superintendent during the above period in addition to his other duties, but temporarily assisted from 24th June to 17th September by Mr. H. Foster, D.I.C.T.A.
- (3) Vacation leave from 1st May to 2nd September, during which time Mr. R.L. Blanchard acted.





# ANNUAL REPORT OF THE AGRICULTURAL DEPARTMENT, DOMINICA.

FOR THE YEAR ENDED 31st DECEMBER, 1939.

*(Abridged for reasons of economy)*

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## SECTION I.

### AGRICULTURE IN THE PRESIDENCY.

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#### 1. WEATHER CONDITIONS.

THE year under review was a particularly dry one for Dominica and rainfall registered at the Botanic Gardens amounted to only 68.29 inches as compared with an average of 75.84 inches for the past twenty years. Distribution was fairly even and heavy rainstorms few. In the month of April, however, which is normally very dry, frequent showers and cloudy weather were experienced and consequently loss of lime blossom through withertip disease was heavy. By the end of May the soil in most cultivations was badly dried out, and all crops suffered in varying degrees. Oranges were mostly affected, there being a very heavy shedding of young fruits.

In the wet season precipitation was lower than usual, except in October, and good planting weather was experienced only for short and infrequent intervals.

Meteorological data are given in the usual tables in Appendix III to this report.

#### 2. AGRICULTURAL INDUSTRIES.

*(See also Table of Exports --- pages 4 & 5.)*

**Limes.**—The exports of lime products were equivalent to 57,214 barrels of fruit valued for Customs purposes at £21,147 as against 58,982 barrels at £23,542 in the previous year. This decrease is almost entirely due to the wet and cloudy weather experienced when the limes were in flower, conditions responsible for increasing the incidence of withertip disease. Lime plantations also suffered through the very dry weather experienced after the flowering period and this somewhat affected yields.

The market for lime oil left much to be desired and falling prices resulted in a drop in the local price paid for ripe limes. Prices however were firmer towards the end of the year, but those of other products were generally comparable with those obtaining in 1938.

The green lime trade with the U.S.A. showed further decline but shipments to Canada increased. Trial shipments of limes were made to England and with fairly satisfactory results, but had to be discontinued owing to the outbreak of war.

For purposes of comparison with earlier years the following table shows the crop shipped since 1919, calculated as barrels of fruit and expressed in round numbers :—



## AGRICULTURAL INDUSTRIES.

| <i>Years.</i>        | <i>Barrels.</i> | <i>Remarks.</i>                                                                                |
|----------------------|-----------------|------------------------------------------------------------------------------------------------|
| 1919/22 (average) .. | 422,000         | Decrease from 1922 due to withertip disease.                                                   |
| 1923/26 ( „ ) ..     | 274,000         |                                                                                                |
| 1927/30 ( „ ) ..     | 165,000         | Decreases accentuated by hurricanes and root diseases, with rapid dying out of seedling trees. |
| 1931/33 ( „ ) ..     | 51,000          |                                                                                                |
| 1934/36 ( „ ) ..     | 31,000          |                                                                                                |
| 1937 ( actual ) ..   | 36,000          | Increase from new plantings of budded trees.                                                   |
| 1938 ( „ ) ..        | 59,000          | Includes carry-over.                                                                           |
| 1939 ( „ ) ..        | 57,000          |                                                                                                |

The figures for any one year do not necessarily represent annual production as there is often an appreciable carry-over of products at the end of a calendar year.

At present production is largely in the hands of estate owners and little extension in this direction is anticipated, but the peasantry are now tending to give more serious attention to the planting of budded limes which for a time they were apt to regard with suspicion.

The following table shows the quantities of various lime products calculated as barrels of fruit and exported during the past five years. Raw and concentrated lime juice although exported are not specifically included in the table since oils are derived from the same fruits.

| <i>Product.</i>       | <i>Barrels of Fruit.</i> |              |              |              |              |
|-----------------------|--------------------------|--------------|--------------|--------------|--------------|
|                       | <i>1935.</i>             | <i>1936.</i> | <i>1937.</i> | <i>1938.</i> | <i>1939.</i> |
| Distilled Lime Oil .. | 20,961                   | 26,517       | 24,606       | 46,989       | 46,395       |
| Ecquelled Lime Oil .. | 1,120                    | 2,800        | 88           | 464          | 144          |
| Oil in Raw Juice ..   | 1,890                    | 3,813        | 7,003        | 7,707        | 4,780        |
| Green Limes .. ..     | 4,035                    | 3,555        | 4,450        | 3,789        | 5,857        |
| Pickled Limes .. ..   | 207                      | 140          | 275          | 33           | 38           |
|                       | 28,213                   | 36,825       | 36,422       | 58,982       | 57,214       |

NOTE: 1 barrel of green limes averages 160 lbs. net weight.

The conversion table is as follows:---

Ecquelled Oil (lbs.) multiplied by 8 equals Barrels of fruit ecquelled.

Total distilled oil (lbs.), minus total ecquelled (lbs.), multiplied by 3 equals Barrels of fruit unequelled.

Oil (lbs.) in raw lime juice multiplied by  $3\frac{1}{2}$  equals Barrels of fruit exported as raw juice.

**Bananas.**—Fruit accepted by the Canadian Banana Company Ltd. under their contract with the Dominica Banana Association plus that of a small inter-island trade reached the not inconsiderable total of over 140,000 bunches in both 1937 and 1938 and hopes were entertained that this total would be exceeded in 1939. Such however was not the case and exports fell to 49,086 bunches (including 2,030 paid for but not shipped) of which 40,135 were sold under the contract.

The following figures supplied by the local Banana Association show the numbers of bunches sold under contract during the last three years. Those for bunches short shipped represent fruit paid for by the Canadian Banana Co. but not shipped.

| <i>Year.</i> | <i>Shipped.</i> | <i>Short Shipped.</i> | <i>Total.</i> |
|--------------|-----------------|-----------------------|---------------|
| 1937         | 106,361         | 27,651                | 134,012       |
| 1938         | 65,632          | 61,445                | 127,077       |
| 1939         | 38,105          | 2,030                 | 40,135        |



## AGRICULTURAL INDUSTRIES.

The reason for this decline is considered locally to be due to a tightening-up in the standard of the fruit acceptable by the Company. It is not difficult to understand that severe rejection of fruit submitted for sale, in one instance as high as 50%, on board, after heavy preliminary rejection ashore, had a demoralising effect on growers, who became more diffident than ever about extending their cultivations or exercising sufficient care over existing ones. The industry received yet another blow in that steamers ceased calling at Portsmouth in the northern part of the island where most of the fruit is grown and prospects for expansion greatest. The future outlook is anything but bright and the Banana Association is doing its utmost to alleviate the situation and restore confidence in the industry.

**Other Fruits.**—Production of oranges, grapefruit, mangoes and avocado pears is progressively increasing as young plantings come into bearing. Exports however are controlled by market requirements and prices, which were not very favourable. Grapefruit in particular met a very slow market and large quantities had to remain unshipped.

As most of the fruit handled by the Government Marketing Depot is for consignment to distant markets, the report of this branch of the department in Appendix II serves to show in more detail the present position of the fruit export trade. The local Treasury returns of total exports in 1939 of the principal fruits, other than limes and bananas, were 29,945 packages valued at £12,942. These included fruit peddled by hucksters in the neighbouring West Indian islands.

**Other Products.**—The trade in cocoa, copra, bay oil and several other products suffered on account of depressed markets and the number of dry coconuts shipped was appreciably reduced owing to a former annual contract not being renewed. There was a slight improvement in the exports of vanilla and bay oil, but the year was a very difficult one for producers. The major problem confronting agriculturists in Dominica is still the difficulty of finding remunerative outlets for their crops.

**Local Foodstuffs.**—After the outbreak of war, increased activity occurred in the planting of local food crops, more particularly of ground provisions. Dominica is exceptionally well situated for the production of local foodstuffs, and the gradually increasing consumption due to partial restriction of imported foods can be met without difficulty and a surplus made available for extending the sloop and huckster trade with neighbouring islands not so favourably situated.

TABLE OF EXPORTS FROM DOMINICA.

| 3. EXPORTS FROM                           |                |                       |                |                       |
|-------------------------------------------|----------------|-----------------------|----------------|-----------------------|
|                                           | 1935.          |                       | 1936.          |                       |
|                                           | Quantity.      | F.O.B.<br>Value.<br>£ | Quantity.      | F.O.B.<br>Value.<br>£ |
| <b>Lime Products :</b>                    |                |                       |                |                       |
| Concentrated Juice ...                    | 3,372 gals.    | 184                   | 2,783 gals.    | 198                   |
| Raw Juice ...                             | 48,074 „       | 2,002                 | 88,460 „       | 3,686                 |
| Lime Juice Cordial ...                    | —              | —                     | —              | —                     |
| Distilled Oil ...                         | 7,127 lbs.     | 7,443                 | 9,189 lbs.     | 9,612                 |
| Ecuelled Oil ...                          | 140 „          | 186                   | 350 „          | 565                   |
| Oils in Solution ...                      | 567 „          | 589                   | 1,144 „        | 1,156                 |
| Green Limes ...                           | 4,035 brls.    | 6,123                 | 3,555 brls.    | 5,518                 |
| Pickled Limes ...                         | 207 „          | 474                   | 140 „          | 352                   |
| <b>Other Fruits and Allied Products :</b> |                |                       |                |                       |
| Oranges ...                               | 10,746 crates  | 5,773                 | 12,754 crates  | 7,319                 |
| Orange Oil ...                            | 1,131 lbs.     | 235                   | 70 lbs.        | 14                    |
| Grapefruit ...                            | 5,386 crates   | 2,596                 | 3,038 crates   | 1,586                 |
| Grapefruit Juice ...                      | 329 gals.      | 31                    | 2,143 gals.    | 199                   |
| Bananas ...                               | 71,527 bunches | 5,780                 | 99,858 bunches | 8,391                 |
| Mangoes ...                               | 3,462 crates   | 1,363                 | 8,616 crates   | 3,164                 |
| Avocado Pears... ..                       | 3,726 „        | 744                   | 5,158 „        | 1,171                 |
| Miscellaneous ...                         | —              | 224                   | —              | 249                   |
| <b>Cocoa Products :</b>                   |                |                       |                |                       |
| Cocoa, Raw ...                            | 344,156 lbs.   | 3,459                 | 354,578 lbs.   | 4,168                 |
| Cocoa, Prepared ...                       | 1,032 „        | 15                    | 1,161 „        | 25                    |
| <b>Coconut Products :</b>                 |                |                       |                |                       |
| Copra ...                                 | 278,793 lbs.   | 1,066                 | 273,612 lbs.   | 1,497                 |
| Coconuts ...                              | 230,170        | 452                   | 719,554        | 1,991                 |
| <b>Sugar Products :</b>                   |                |                       |                |                       |
| Rum ...                                   | 10,179 gals.   | 1,428                 | 3,090 gals.    | 424                   |
| <b>Bay Products :</b>                     |                |                       |                |                       |
| Bay Oil ...                               | 16,474 lbs.    | 2,421                 | 21,282 lbs.    | 3,229                 |
| Bay Rum ...                               | 516 gals.      | 92                    | 963 gals.      | 168                   |
| <b>Spices :</b>                           |                |                       |                |                       |
| Vanilla ...                               | 609 lbs.       | 153                   | 4,341 lbs.     | 868                   |
| Nutmegs ...                               | —              | 6                     | 310 „          | 7                     |
| Ginger ...                                | —              | 9                     | 2,094 „        | 25                    |
| <b>Other Products :</b>                   |                |                       |                |                       |
| Coffee ...                                | 859 lbs.       | 22                    | 728 lbs.       | 14                    |
| Vegetables ...                            | —              | 35                    | —              | 56                    |
| Farine ...                                | —              | 14                    | —              | 6                     |
| Hides and Skins ...                       | —              | 1                     | —              | —                     |
| Leather, Unmanufac/d ...                  | —              | 63                    | —              | 92                    |
| Turtle Shells ...                         | —              | 26                    | —              | 45                    |
| Tobacco, Cigars & Cigarettes ...          | 6,568 lbs.     | 495                   | 3,156 lbs.     | 200                   |
| Miscellaneous ...                         | —              | 352                   | —              | 200                   |
| <b>Forest Products :</b>                  |                |                       |                |                       |
| Hardwood ...                              | 95,407 ft.     | 537                   | 131,638 ft.    | 710                   |
| Firewood ...                              | 46 cords       | 10                    | 192 cords      | 71                    |
| Canoe Shells ...                          | 7              | 7                     | 14             | 28                    |
| Shingles ...                              | —              | 2                     | —              | —                     |
| Charcoal ...                              | —              | 12                    | —              | 23                    |
| Locally made boats ...                    | —              | 456                   | 158            | 632                   |
| Baskets ...                               | —              | 11                    | —              | 10                    |
| Other Forest Products.                    | —              | —                     | —              | —                     |
| <b>Value of Local Exports</b> ...         |                | 44,891                |                | 57,669                |
| <b>Total Re-Exports</b> ...               |                | 12,595                |                | 12,300                |
| <b>Value of Total Exports</b> ...         |                | £57,486               |                | £69,969               |

NOTE 1. Various sized packages are used in the export of fruit and exports given above are converted to the most common pack.



## TABLE OF EXPORTS FROM DOMINICA.

## DOMINICA — 1935 TO 1939.

| 1937.           |                       | 1938.          |                       | 1939.          |                       |
|-----------------|-----------------------|----------------|-----------------------|----------------|-----------------------|
| Quantity.       | F.O.B.<br>Value.<br>£ | Quantity.      | F.O.B.<br>Value.<br>£ | Quantity.      | F.O.B.<br>Value.<br>£ |
| 1,735 gals.     | 130                   | 469 gals.      | 41                    | 6,407 gals.    | 497                   |
| 110,765 "       | 4,679                 | 125,249 "      | 6,145                 | 111,119 "      | 5,038                 |
| 49 "            | 5                     | 300 "          | 45                    | —              | —                     |
| 8,213 lbs.      | 7,057                 | 15,721 lbs.    | 10,408                | 15,483 lbs.    | 8,018                 |
| 11 "            | 14                    | 58 "           | 61                    | 18 "           | 27                    |
| 2,101 "         | 2,208                 | 2,312 "        | 1,494                 | 1,434 "        | 754                   |
| 4,450 brls.     | 6,643                 | 3,789 brls.    | 5,288                 | 5,857 brls.    | 6,753                 |
| 110 "           | 263                   | 33 "           | 60                    | 38 "           | 60                    |
| 14,021 crates   | 7,058                 | 10,448 crates  | 5,340                 | 13,609 crates  | 6,851                 |
| 663 lbs.        | 159                   | 1,771 lbs.     | 355                   | 393 lbs.       | 122                   |
| 4,375 crates    | 1,871                 | 4,568 crates   | 1,894                 | 5,372 crates   | 1,859                 |
| 4,331 gals.     | 377                   | 755 gals.      | 66                    | —              | —                     |
| 114,812 bunches | 10,658                | 78,864 bunches | 8,115                 | 47,056 bunches | 4,183                 |
| 6,056 crates    | 2,478                 | 8,204 crates   | 2,366                 | 7,789 crates   | 2,940                 |
| 4,845 "         | 719                   | 6,294 "        | 1,320                 | 6,305 "        | 1,292                 |
| —               | 535                   | —              | 346                   | —              | 308                   |
| 274,108 lbs.    | 4,983                 | 391,095 lbs.   | 3,292                 | 216,268 lbs.   | 2,206                 |
| 786 "           | 24                    | 2,166 "        | 32                    | 620 "          | 15                    |
| 116,016 lbs.    | 773                   | 239,680 lbs.   | 1,042                 | 499,379 lbs.   | 1,991                 |
| 1,046,312       | 3,271                 | 1,139,069      | 3,358                 | 350,660        | 1,192                 |
| 3,339 gals.     | 480                   | 5,535 gals.    | 697                   | 7,193 gals.    | 909                   |
| 19,635 lbs.     | 2,945                 | 28,666 lbs.    | 3,936                 | 29,624 lbs.    | 3,590                 |
| 714 gals.       | 147                   | 1,352 gals.    | 282                   | 698 gals.      | 145                   |
| 9,537 lbs.      | 4,047                 | 7,504 lbs.     | 3,755                 | 9,428 lbs.     | 4,681                 |
| —               | —                     | 64 "           | 2                     | 141 "          | 4                     |
| —               | 5                     | 3,250 "        | 6                     | 1,337 "        | 8                     |
| 1,509 lbs.      | 27                    | 1,432 lbs.     | 24                    | 2,892 lbs.     | 32                    |
| —               | 183                   | —              | 206                   | —              | 231                   |
| —               | 27                    | —              | 5                     | —              | —                     |
| —               | 19                    | —              | 18                    | —              | 110                   |
| —               | 101                   | —              | 123                   | —              | 35                    |
| —               | 91                    | —              | 62                    | —              | 68                    |
| 4,954 lbs.      | 299                   | 11,693 lbs.    | 1,047                 | 5,436 lbs.     | 676                   |
| —               | 467                   | —              | 184                   | —              | 776                   |
| 94,451 ft.      | 454                   | 41,356 ft.     | 221                   | 46,410 ft.     | 266                   |
| 229 cords       | 74                    | 348 cords      | 127                   | 219 cords      | 59                    |
| —               | 18                    | —              | 16                    | 1              | 2                     |
| —               | 3                     | —              | 23                    | —              | 3                     |
| —               | 15                    | —              | 366                   | —              | 6                     |
| —               | 456                   | —              | 18                    | —              | 256                   |
| —               | 7                     | —              | —                     | —              | 23                    |
| —               | —                     | —              | —                     | —              | 4                     |
| —               | 63,770                | —              | 62,186                | —              | 55,990                |
| —               | 9,291                 | —              | 15,387                | —              | 9,087                 |
| —               | £73,061               | —              | £77,573               | —              | £65,077               |

2. The areas under various crops cannot be given owing to a preponderance of peasant holdings and numerous small estates having no pure stand of any one crop.

## PRINCIPAL FOODSTUFFS IMPORTED.

## 4. PRINCIPAL FOODSTUFFS IMPORTED. 1935 - 1939.

|              |                 | 1935     |            | 1936      |                | 1937     |            | 1938     |            | 1939      |            |
|--------------|-----------------|----------|------------|-----------|----------------|----------|------------|----------|------------|-----------|------------|
|              |                 | Quantity | Value<br>£ | Quantity  | Value<br>£     | Quantity | Value<br>£ | Quantity | Value<br>£ | Quantity  | Value<br>£ |
| *Fish        | lbs.            | 358,021  | 4,641      | 353,084   | 3,807          | 367,060  | 4,692      | 387,769  | 4,121      | 357,583   | 3,847      |
| *Meat        | "               | 29,828   | 709        | 31,097    | 927            | 29,967   | 797        | 27,891   | 713        | 30,729    | 1,082      |
| Sugar        | "               | 990,204  | 5,675      | 1,081,332 | 5,371          | 999,547  | 5,018      | 991,264  | 5,235      | 1,146,720 | 6,289      |
| Flour        | bags of 98 lbs. | 22,341   | 12,244     | 20,360    | 10,962         | 17,060   | 11,574     | 19,754   | 10,487     | 21,966    | 9,779      |
| Oils, Edible | gals.           | 20,208   | 3,446      | 20,058    | 3,279          | 20,730   | 3,808      | 21,585   | 2,964      | 23,026    | 3,031      |
| Potatoes     | lbs.            | 55,511   | 187        | 42,600    | <del>234</del> | 48,543   | 230        | 54,043   | 219        | 36,724    | 184        |
| Rice         | "               | 288,207  | 1,585      | 300,980   | 1,553          | 294,084  | 1,614      | 373,149  | 1,830      | 305,471   | 1,468      |
| Fats         | "               | 124,491  | 3,692      | 128,771   | 3,639          | 144,480  | 3,506      | 126,578  | 3,272      | 125,151   | 3,201      |

\* Canned included. X



## PLANT DISTRIBUTION.

## SECTION II.

## WORK OF THE DEPARTMENT.

## 1. THE BOTANIC GARDENS.

**Decorative Section.**—This section of the Gardens was maintained in attractive condition and in addition to the usual attention paid to botanical specimens and lawns, repairs or renewals to roads and paths, fences, gates, benches, walls and other fixtures were effected where necessary. Some new plantings were made, but hot, dry weather retarded progress. The Morne lands and public gardens were kept in good order.

**Economic Section.**—A summary of the contents of the demonstration and trial plots was given in the 1937 report. Since that time no major alterations have been made and good progress has occurred.

Trials with short crops included those of hill rice, adlay, yams and sorrel. The two former were not very successful and further trials will be made.

A hillside plot was cleared of old cacao trees and planted with avocado pear varieties. Special prominence was again given to anti-erosion measures throughout the section, including the use of silt pits and of cover crops.

**Nursery.**—Pot nursery work was re-organised to meet a reduction in funds provided for plant distribution. The numbers of economic plants raised were nevertheless maintained, but the propagation of decorative plants was considerably reduced.

**Plant and Seed Exchange.**—Contributors of planting material included C.L. Coriette, Esq., and the late L.P. Napier, Esq., of Dominica; Coconut Grove Palmetum, Florida, U. S. A., Arthur Langlois, Esq., Nassau, Bahamas, the Acting Commissioner of Agriculture, Trinidad, the Agricultural Departments of Ceylon, Trinidad and Montserrat and the Agricultural Research Institute, Nagpur, India.

Recipients of plants or seeds for trial purposes included Capt. G.F. Ashpitel, J. C. Bruney, Esq., and the Hon. H. D. Shillingford of Dominica; the Acting Commissioner of Montserrat, the Agricultural Departments of St. Lucia and St. Vincent; the Royal Botanic Gardens, Trinidad, and F. G. Walsingham, Esq., Cuba.

**Records.**—Costs and returns were kept for all sections of the gardens, as well as records of manuring and experimental work in the case of selected plots and crops.

## 2. PLANT DISTRIBUTION.

Frequent periods of conditions approaching drought rendered nursery work particularly difficult, especially at the Morne nurseries where the water supply ran short, but on the whole satisfactory if slow growth was obtained and the health of nursery stocks was generally good. Distribution was maintained at a level above the average for the past three years.

Funds for 1940 having been materially curtailed, fewer stocks were set out for future distribution, especially of sour orange for the production of budded citrus, of which limes and oranges were the chief items propagated.

Increased assistance was given to private nurseries and the top-working of undesirable types of fruit trees on estates was continued.

The demand for vegetable seeds retailed at cost and charges improved.

Expenditure on plant distribution work amounted to £471. 8. 11 and revenue to £154. 1. 5½. The latter figure was low owing to the large proportion of economic plants sold to approved peasants at half the nominal rates charged to planters.

The following tables show the variety and numbers of plants annually distributed during the past three years.

# EXPERIMENT STATION.

## BUDDED OR GRAFTED PLANTS.

| <i>Name of Plants.</i>          | <i>Total for<br/>1937.</i> | <i>Total for<br/>1938.</i> | <i>Total for<br/>1939.</i> |
|---------------------------------|----------------------------|----------------------------|----------------------------|
| Washington Navel Orange . . . . | 1,817                      | 5,516                      | 4,260                      |
| Other Oranges . . . . .         | * 283                      | 586                        | 167                        |
| Marsh Grapefruit . . . . .      | 412                        | 602                        | 160                        |
| West Indian Limes . . . . .     | 3,327                      | 7,284                      | 6,416                      |
| Other Citrus . . . . .          | 1                          | 256                        | 72                         |
| Avocado Pears . . . . .         | 91                         | 200                        | 152                        |
| Mangoes . . . . .               | 73                         | 40                         | 30                         |
|                                 | 6,004                      | 14,484                     | 11,257                     |

\* Principally Valencia.

## OTHER ECONOMIC PLANTS.

| <i>Name of Plants.</i>       | <i>Total for<br/>1937.</i> | <i>Total for<br/>1938.</i> | <i>Total for<br/>1939.</i> |
|------------------------------|----------------------------|----------------------------|----------------------------|
| Sugar Cane . . . . .         | —                          | —                          | 4,500                      |
| Sour Orange Stocks . . . . . | 1,050                      | 10,304                     | 5,862                      |
| Cacao . . . . .              | 764                        | 958                        | 754                        |
| Coffee . . . . .             | 12                         | —                          | 879                        |
| Nutmeg . . . . .             | 99                         | 323                        | 253                        |
| *Miscellaneous . . . . .     | 2,353                      | 559                        | 186                        |
|                              | 4,278                      | 12,144                     | 12,434                     |

\* Includes cuttings and plants for cover crop and mulch purposes.

## 3. EXPERIMENT STATION.

The trial plots of limes budded on various rootstocks are laid out mainly for demonstration, particularly as regards the value of anti-erosion measures including cover cropping with *Tephrosia candida*, and the use of lemon grass for mulch purposes. In common with other lime plantations in Dominica, yields decreased slightly in 1939 owing to adverse weather conditions.

Detailed records of costs and returns as well as of manurial treatments are kept for all plots which greatly facilitate economical working and provide useful information as to the cost of lime production.

The following data show the relative yields of the more important plots since the replanting programme was commenced in 1931 :—

**Trials of Stocks for Budded Limes.**—2.40 acres planted 1930, triplicate series.

### **Plots 1, 2 & 3.**

### **Actual Yields in Barrels of Limes.**

| <i>Period.</i>  | <i>On<br/>Rough Lemon<br/>1A, 2A, 3A.</i> | <i>On<br/>Grapefruit.<br/>1B, 2B, 3B.</i> | <i>On<br/>Sour Orange.<br/>1C, 2C, 3C.</i> | <i>Totals.</i> |
|-----------------|-------------------------------------------|-------------------------------------------|--------------------------------------------|----------------|
| 1932-38         | 290½                                      | 328                                       | 284                                        | 902½           |
| 1939            | 58½                                       | 72                                        | 74                                         | 204½           |
| Total, 8 years. | 349                                       | 400                                       | 358                                        | 1,107          |



## PESTS AND DISEASES.

**Old Budded Lime Trees.**—85 and .51 acres planted 1913-14.

**Calculated Yields in Barrels per Acre.**

| Plot No. | 1933 | 1934 | 1935 | 1936 | 1937 | 1938 | 1939. |
|----------|------|------|------|------|------|------|-------|
| 4        | 79   | 121  | 155  | 147  | 135  | 141  | 120   |
| 5        | 86   | 123  | 200  | 225  | 208  | 150  | 145   |

Plot 5 is on better soil but suffered most after the hurricanes in 1928 and 1930. Both plots are on sour orange stock and yields continue profitable despite the age and loss of several trees.

**Other Budded Limes.**—5.84 acres planted 1931-32.

Plots 7-11 are demonstrations of various methods of hillside cultivation and anti-erosion measures for soil conservation and improvement. Their yields for the past three years were 287, 472 and 375 barrels. The latter figure is equivalent to only 64 barrels per acre, these plots having been seriously affected by drought.

**Shade Trials for Limes (Plot 18) and Seedless Limes (Plot 19).**—These plots, of which details appeared in previous reports, were planted only two years ago and yields of fruit are therefore negligible but good increments of growth have occurred.

**Grapefruit.**—Plots 12A & B containing grapefruit varieties planted in 1916 continue to give early and late crops as a result of applications of artificial manures in December and May respectively. In spite of the age of the trees, the incidence of gummosis and the fact that several of the varieties are seedy, yields remain satisfactory.

**Top-Working of Limes and Grapefruit.**—Commenced in 1934-36.

Fruiting compares very favourably age for age with trees propagated in the usual way by budding, and as a result the top-working of undesirable types of citrus is now being practised on many estates.

#### 4. PESTS AND DISEASES.

Serious losses of crop except in small localised areas were not observed. The following troubles were the subject of investigation by officers of the department and/or Mr. R. G. Fennah, Entomologist for Citrus Pests in the Windward and Leeward Islands, who paid several visits to the island during the year. The department gratefully acknowledges the assistance rendered by Mr. Fennah.

**Panama Disease.**—The banana inspectors, whose work is dealt with elsewhere, continued to search out and destroy with gas oil stools found to be infected in the seven districts operated by them. The average disease incidence for all districts was 1.02% in 28,008 stools inspected per month, as compared with 1.61% in 37,165 stools per month last year. The usual quarantine and advisory work was also continued.

**Cercospora Leaf Spot.**—So far only one small cultivation of bananas is known to be attacked by this disease and drastic control measures have helped to limit infection to negligible proportions.

**Withertip of Limes.**—Work was continued on the raising and selection of resistant hybrids, also the testing of fruits from young hybrid trees and the back-crossing of such as appeared to offer a possibility of ultimate success. Some seedlings of crosses between the West Indian and Persian or Tahiti limes (Bears' Seedless) were obtained.

**Vanilla Black Pod Rot.**—No causal agent has been identified and it is believed that this trouble may be physiological as it has so far been observed only during dry years.

**Gummosis of Citrus.**—A peasant's lime piece containing trees budded on three different stocks and badly attacked by this disease is under observation and experiment. In several cases the primary factor appears to have been damage to the crown roots caused by implements and root grubs, and bare-rooting and pining diseased tissue resulted in complete or partial recovery of trees not too severely affected.

**Orange Moth.**—Mr. Fennah studied the habits and alternative hosts of this pest and preliminary control measures are under trial.

## AGRICULTURAL INSTRUCTION.

**Fruit-piercing Moths.**—Undetermined species found attacking late oranges and grapefruit are being studied by Mr. Fennah. Methods of control by spraying with repellants were conducted with only partial success by the department.

**Citrus Weevil Grubs.**—The damage occasioned to the roots of citrus, especially in the drier coastal regions, continued to engage attention. Various experiments are under way and the method of bare-rooting has been adopted by the department and some growers. This subject is fully dealt with in Mr. Fennah's reports, which have been circulated to interested parties. In the citrus nurseries, hand-picking of egg masses is carried out once or twice weekly according to the prevalence of adult beetles.

## 5. AGRICULTURAL INSTRUCTION AND ADVISORY WORK.

The usual services were maintained, and as full details were given in last year's report and the current year's work was on essentially similar lines, only the more important items are here enumerated.

**Pupils.**—During those periods when there was no senior assistant available owing to the absence of the Agricultural Superintendent, lectures and demonstrations were mainly undertaken by the Peasants' Adviser, the Foreman and in the case of junior pupils, the Head Pupil. The Headmaster of the Grammar School kindly permitted one of his staff to take Botany lectures during the last session. The average number of pupils was sixteen, but several unpaid probationers were also given instruction. All pupils took part in increasing the production of vegetables in their own garden.

Departmental costings, returns and other records are kept by senior pupils to whom the economic basis underlying all operations is thus imparted.

**Grammar School.**—The acting Agricultural Superintendent gave the usual lectures and demonstrations to boys taking the soil and crop science course of the school.

**Peasant Advisory Work.**—The Peasants' Adviser and seven banana inspectors regularly continued to operate all the more populous districts and the former made periodical tours of other parts of the island. The nature of their work brings them into close contact with the peasantry and recently more general agricultural matters have received attention in addition to the usual work in connection with the banana industry. In particular, the supervision of the raising of citrus plants in private nurseries and the planting and care of plants supplied from the departmental nurseries at headquarters were again given close attention.

A new phase of their activities was to encourage peasants not only to grow more foodstuffs to meet war conditions, but also a greater variety. A pamphlet on this subject was written and widely distributed and talks given stressing the desirability of increasing the use of meat, milk, eggs, green vegetables, fruits and pulses to counterbalance the present excessive use of starchy foods.

**Soil Conservation.**—Attention was again directed to the menace of soil erosion and the district officers and education department are to collaborate in propaganda work in this connection. Reference has been made to control work carried out by the department in the Economic Section of the Gardens and the Experiment Station. A pamphlet was prepared for local distribution and is being printed.

**Boards and Committees.**—The department actively co-operated with the following bodies: Agricultural Advisory Committee, Lime Growers' Association, Fruit Trade Advisory Committee, Loans Investigation Committee and the Banana Association, which met as occasion demanded.

**Crown Lands and Peasants' Tracks.**—Numerous applications from peasants wishing to purchase Crown lands or obtain improvement to tracks were investigated and reports submitted to the Public Works Department.

**Acknowledgements.**—The thanks of the department are extended to planters for their kind hospitality to visiting officers, also to Mr. J. E. Knowlton and Mr. C. J. L. Dupigny for their assistance in the installation of gassing chambers and orange colouring plant, etc. in the Marketing Depot.



## FINANCIAL STATEMENT.

## 6. CORRESPONDENCE.

Six hundred and fifty-nine letters were dispatched and four hundred and seventy-five Minute Papers dealt with, in addition to numerous confidential Minute Papers. Various agricultural and meteorological returns and departmental progress reports were prepared and submitted periodically. Copies of pamphlets and reports on general agriculture were distributed locally to persons interested.

## 7. LABORATORY.

A small laboratory is maintained for the purpose of examination and analysis of commercial products and during the year the chief tests made were as follows :--

|                                 |     |
|---------------------------------|-----|
| Raw Lime Juice .. .. .          | 28  |
| Concentrated Lime Juice .. .. . | 3   |
| Bay Oil .. .. .                 | 390 |
| Milk .. .. .                    | 25  |

## SECTION III.

## FINANCIAL STATEMENT.

**Expenditure and Revenue.**--Statements of expenditure and revenue with regard to special services are given in the appropriate sections of the report. Expenditure, other than on special services, and the general revenue of the Department were as follows :--

## EXPENDITURE

|                                                         | £       | s.  | d. |
|---------------------------------------------------------|---------|-----|----|
| Personal Emoluments .. .. .                             | 1,163.  | 6.  | 10 |
| Contingencies .. .. .                                   | 8.      | 13. | 3  |
| Maintenance of Botanic Gardens .. .. .                  | 269.    | 19. | 8  |
| Cultivation of Demonstration Plots, &c. .. .. .         | 234.    | 5.  | 0  |
| Purchase of Special Manures .. .. .                     | 64.     | 10. | 3  |
| Experiment Station .. .. .                              | 319.    | 16. | 2  |
| Upkeep of Morne Bruce Lands & Military Cemetery .. .. . | 19.     | 19. | 7  |
| Chemicals & Apparatus .. .. .                           | 4.      | 6.  | 11 |
| Upkeep of Horses & Mules .. .. .                        | 17.     | 0.  | 9  |
| Tools and Equipment .. .. .                             | 62.     | 18. | 0  |
| Agricultural Pupils .. .. .                             | 193.    | 4.  | 8  |
| Transport Allowance to Peasants' Adviser .. .. .        | 50.     | 0.  | 0  |
| Purchase of Goats .. .. .                               | 10.     | 0.  | 4  |
| Banana Disease Control .. .. .                          | 467.    | 0.  | 8  |
|                                                         | £2,885. | 2.  | 1  |

## REVENUE.

|                             |       |     |    |
|-----------------------------|-------|-----|----|
| Limes .. .. .               | £173. | 14. | 8  |
| Cocoa .. .. .               | 15.   | 2.  | 11 |
| Fruit .. .. .               | 81.   | 5.  | 8  |
| Vegetable Seeds .. .. .     | 22.   | 0.  | 5  |
| Laboratory Receipts .. .. . | 30.   | 2.  | 6  |
| Miscellaneous .. .. .       | 29.   | 13. | 7  |
|                             | £351. | 19. | 9  |

## SECTION IV.

## LEGISLATION AFFECTING AGRICULTURE.

In the 1936 report of the department a complete list was given of legislation affecting agriculture and then in force, additional enactments having been recorded in subsequent reports.

In 1939 the following was the only legislation of direct interest to local agriculturists:—

Statutory Rules & Orders, No. 16 of 1939, amended certain provisions of existing rules regulating the operations of the Dominica Banana Association.

## APPENDIX I.

REPORT OF THE MANAGER,  
GOVERNMENT FRUIT FARM, COPT HALL.

1. **Policy.**—The original scheme for dividing the estate into plots for local settlers has been abandoned and the farm is now for sale as one unit. Consequently expenditure has been reduced to a care and maintenance basis.

The area under oranges and grapefruit, which are healthy and only recently commenced bearing, is approximately 100 acres.

2. **Staff.**—The undersigned continued to supervise the farm in addition to his other duties, which from the 17th April to the 9th December included those of Acting Agricultural Superintendent.

3. **Progress.**—The year was on the whole favourable for citrus and in plots cover-cropped with *Tephrosia candida* good growth occurred.

4. **Manuring, etc.**—Funds again proved insufficient to permit of the purchase of artificial manures, but all plots received two dressings of lemon grass mulch grown on roadsides and hillsides for the purpose. Several advanced plots were given an application of lime.

5. **Wind-breaks.**—The harmful effects of wind are much less apparent now that windbreaks are becoming well established but the breaks of *Inga* spp. planted a few years ago, although improved, have by no means reached their maximum height.

6. **Routine.**—The general routine work was carried out as usual, namely weeding, cleaning drains, pruning where necessary, and attention to cover crops. Further areas were replanted with *Tephrosia candida*. Roads, tracks and fences were kept in good order.

7. **Top-working.**—Several hundred trees bearing unprofitable types of fruit such as seedy grapefruit and Portugal oranges, were either top-grafted to seedless types or replaced.

8. **Expenditure** was as follows:—

|                                          |       |     |    |
|------------------------------------------|-------|-----|----|
| Foreman .. .. .                          | £ 75. | 0.  | 0  |
| Annuity to previous owner .. ..          | 75.   | 0.  | 0  |
| Tools, etc. .. .. .                      | 4.    | 16. | 5  |
| Maintenance .. .. .                      | 446.  | 18. | 10 |
| Manager's Transport (discontinued) .. .. | 3.    | 11. | 0  |
|                                          | £605. | 6.  | 3  |

9. **Revenue.**—This amounted to £83. 19. 7. as compared with £23. 3. 0. last year. Account sales received in 1940 are not included.

H. B. PIDDUCK,  
Assistant Agricultural Officer,  
Manager, Government Fruit Farm.



## APPENDIX II.

# REPORT OF THE OFFICER-IN-CHARGE, GOVERNMENT FRUIT PACKING AND MARKETING DEPOT.

**Quantities and F.O.B. values of Fruit packed.**—Table I shows the quantities and f.o.b. values of fruit packed and marketed by the Depot, together with the quantities and values of all fruit packed. The number of crates packed shows an increase of 5,820 over that for 1938, with a commensurate increase of £1,281. 5. 8 over the estimated f. o. b. value of all fruit packed by the Depot in 1938.

TABLE I.

| Produce.               | Size<br>of<br>Crate<br>in<br>cub. ft. | Packed, but not<br>marketed by the Depot. |                                      |    | Packed & Marketed<br>by the Depot. |                |                                | Total packed by the<br>Depot. |    |           |                                      |    |    |
|------------------------|---------------------------------------|-------------------------------------------|--------------------------------------|----|------------------------------------|----------------|--------------------------------|-------------------------------|----|-----------|--------------------------------------|----|----|
|                        |                                       | Quantity.                                 | Estimated<br>F.O.B. Val.<br>£. s. d. |    |                                    | Quan-<br>tity. | Actual<br>F. O. B.<br>£. s. d. |                               |    | Quantity. | Estimated<br>F.O.B. Val.<br>£. s. d. |    |    |
| Oranges ..             | 2                                     | 892                                       | 423                                  | 14 | 0                                  | 6665           | 3165                           | 17                            | 6  | 7557      | 3589                                 | 11 | 6  |
| Grapefruit ..          | 2                                     | 1725                                      | 521                                  | 1  | 10                                 | 2473           | 747                            | 1                             | 1  | 4198      | 1268                                 | 2  | 11 |
| Green Limes ..         | $\frac{3}{4}$                         | 9167                                      | 1718                                 | 16 | 3                                  | 2818           | 529                            | 16                            | 2  | 11985     | 2248                                 | 12 | 5  |
| „ „                    | 2                                     | 653                                       | 378                                  | 3  | 11                                 | 341            | 197                            | 15                            | 8  | 994       | 575                                  | 19 | 7  |
| Lemons ..              | 2                                     | —                                         | —                                    | —  | —                                  | 335            | 141                            | 13                            | 6  | 335       | 141                                  | 13 | 6  |
| Tangerines ..          | $\frac{3}{4}$                         | 44                                        | 5                                    | 10 | 0                                  | —              | —                              | —                             | —  | 44        | 5                                    | 10 | 0  |
| Avocado pears.         | $\frac{3}{4}$                         | 3284                                      | 656                                  | 16 | 0                                  | 582            | 116                            | 8                             | 0  | 3866      | 773                                  | 4  | 0  |
| Grafted<br>Mangoes ..  | $\frac{3}{4}$                         | 825                                       | 85                                   | 18 | 9                                  | 199            | 20                             | 14                            | 7  | 1024      | 106                                  | 13 | 4  |
| Ordinary<br>Mangoes .. | 2                                     | 784                                       | 186                                  | 4  | 0                                  | 80             | 19                             | 0                             | 0  | 864       | 205                                  | 4  | 0  |
| Pumpkins ..            | Brls.                                 | 26                                        | 10                                   | 10 | 8                                  | 109            | 44                             | 3                             | 4  | 135       | 54                                   | 14 | 0  |
| TOTALS ..              |                                       | 17400                                     | 3986                                 | 15 | 5                                  | 13602          | 4982                           | 9                             | 10 | 31002     | 8969                                 | 5  | 3  |

**Average returns and Packing House costs.**—The average returns and packing house costs in Table II are based on shipments made by the Depot on a consignment basis, and costs include gassing and precooling where necessary, portorage, lighterage, inspection and supervision charges, wharfage and export duty.

## APPENDIX

TABLE II.

| <i>Produce.</i>            | <i>Size of<br/>crate in<br/>cu. ft.</i> | <i>Average<br/>F. O. B.<br/>returns.</i> | <i>Average<br/>Packing<br/>House Costs.</i> | <i>Average nett<br/>returns to<br/>Growers.</i> |
|----------------------------|-----------------------------------------|------------------------------------------|---------------------------------------------|-------------------------------------------------|
| Orange, "Washington Navel" | 2                                       | 10/2½                                    | 3/9                                         | 6/5½                                            |
| do. "Valencia" .. ..       | 2                                       | 8/8½                                     | 3/8½                                        | 5/-                                             |
| do. "Seedling" .. ..       | 2                                       | 4/11½                                    | 4/1½                                        | 10d.                                            |
| do. "Other" .. ..          | 2                                       | 3/11                                     | 4/1                                         | debit 2d.                                       |
| Grapefruit, "Marsh" .. ..  | 2                                       | 6/4                                      | 3/4                                         | 3/-                                             |
| do. "Triumph" .. ..        | 2                                       | 5/2                                      | 3/5                                         | 1/9                                             |
| do. "Duncan" .. ..         | 2                                       | 7/3                                      | 3/6                                         | 3/9                                             |
| Green Limes .. ..          | ¾                                       | 3/9                                      | 1/7                                         | 2/2                                             |
| do. .. ..                  | 2                                       | 11/7                                     | 4/4½                                        | 7/2½                                            |
| Lemons .. ..               | 2                                       | 8/5½                                     | 3/5½                                        | 5/-                                             |
| Avocado Pears .. ..        | ¾                                       | 4/-                                      | 1/6                                         | 2/6                                             |
| Grafted Mangoes .. ..      | ¾                                       | 2/1                                      | 1/6                                         | 7d.                                             |
| Ordinary Mangoes .. ..     | 2                                       | 4/9                                      | 2/7                                         | 2/2                                             |

**Oranges.**—The exports early in the year were all "Valencias" and represented the remainder of the 1938-39 crop. These were all successfully marketed and yielded an average return of 6/4 per crate.

The summer crop of oranges reached a record yield, representing approximately 29 per cent. of the entire crop, and was sold at remunerative prices.

**Grapefruit.**—The marketing of grapefruit was curtailed by receipt of advices early in November against further shipments, attributed primarily to the effects of tariff concessions under the Canada-U.S.A. Trade Agreement and the trade disruptions caused by war conditions.

Larger quantities of the "Marsh" variety were available for shipment and exports show a slight increase over the quantity for last year. A limited quantity of seeded fruit was successfully marketed in the early season.

**Limes.**—An increase of approximately one hundred per cent in exports of this item to Canada had the effect of over-supplying the market and was responsible for the low level of average returns as compared with those of previous years. Exports to Bermuda also show a further increase over last year.

Final accounts in respect of two consignments of limes shipped to London via New York have not yet come to hand.

**Lemons.**—The increase in exports, mainly to Bermuda, is due to growers' efforts to supply the existing demand with a greater percentage of popular sized fruit.

In the Canadian market our trade suffered the usual set backs in competition with foreign-grown lemons, which became so severe as to cause cessation of shipments.

**Avocado Pears.**—All avocado pears packed by the Depot were marketed in Bermuda. On the whole prices were steadier and afforded satisfactory returns to growers.

**Mangoes.**—A further marked decline in the demand in Bermuda for the seedling types of this fruit was noticeable, but the demand for grafted varieties showed an increase, which unfortunately could not be met by the rather short crop available.

**Pumpkins.**—Shipments were continued to Bermuda and realised an average price of 0.67d. per lb. to growers.

Expenditure amounted to £1,587. 2. 9., which included the installation of gassing chambers and purchase of a dyeing plant, amounting to £838. 2. 8.

Revenue from sales of ice, packing receipts, inspection fees, etc. was £1,220. 11. 10.

G. A. WINSTON,

*Officer-in Charge,  
Government Marketing Depot.*



| Year.     | PRESSURE.                             |       |        |        | TEMPERATURE. |      |           |      |              |        |      |      | RELATIVE HUMIDITY. | RAIN-FALL |         |
|-----------|---------------------------------------|-------|--------|--------|--------------|------|-----------|------|--------------|--------|------|------|--------------------|-----------|---------|
|           | Corrected & reduced to 32° F., M.S.L. |       |        |        | ABSOLUTE.    |      |           |      | MEAN VALUES. |        |      |      |                    |           | AMOUNT. |
|           | Lowest.                               |       | Means. |        | MAX.         | MIN. | DRY BULB. |      | WET BULB.    |        |      |      |                    |           |         |
|           | Highest.                              | IN.   | 9 a.m. | 3 p.m. |              |      | ° F.      | ° F. | 9 a.m.       | 3 p.m. | ° F. | ° F. |                    |           |         |
| 1939.     | IN.                                   | IN.   | IN.    | IN.    | ° F.         | ° F. | ° F.      | ° F. | ° F.         | ° F.   | ° F. | ° F. | %                  | %         | IN.     |
| January   | 30.08                                 | 29.90 | 30.03  | 29.94  | 88           | 65   | 84        | 68   | 77           | 83     | 72   | 74   | 77                 | 60        | 4.13    |
| February  | 30.11                                 | 29.92 | 30.04  | 29.97  | 88           | 63   | 84        | 66   | 75           | 81     | 70   | 73   | 77                 | 64        | 2.84    |
| March     | 30.11                                 | 29.89 | 30.01  | 29.94  | 88           | 65   | 84        | 67   | 77           | 82     | 72   | 74   | 76                 | 63        | 4.38    |
| April     | 30.08                                 | 29.88 | 30.03  | 29.96  | 88           | 66   | 86        | 69   | 80           | 85     | 73   | 75   | 70                 | 60        | 5.62    |
| May       | 30.07                                 | 29.85 | 29.99  | 29.93  | 93           | 67   | 90        | 70   | 82           | 87     | 75   | 77   | 65                 | 57        | .86     |
| June      | 30.05                                 | 29.88 | 29.99  | 29.95  | 93           | 70   | 91        | 72   | 82           | 86     | 75   | 76   | 71                 | 62        | 4.90    |
| July      | 30.09                                 | 29.89 | 30.00  | 29.95  | 90           | 71   | 88        | 73   | 82           | 86     | 76   | 77   | 75                 | 63        | 7.18    |
| August    | 30.04                                 | 29.85 | 29.97  | 29.91  | 91           | 71   | 89        | 73   | 84           | 88     | 77   | 79   | 73                 | 62        | 6.94    |
| September | 30.03                                 | 29.84 | 29.96  | 29.85  | 92           | 72   | 89        | 73   | 82           | 88     | 78   | 79   | 77                 | 64        | 6.52    |
| October   | 29.98                                 | 29.70 | 29.89  | 29.82  | 91           | 71   | 88        | 73   | 82           | 84     | 78   | 79   | 79                 | 74        | 15.42   |
| November  | 29.97                                 | 29.77 | 29.91  | 29.84  | 91           | 70   | 88        | 70   | 77           | 86     | 77   | 83   | 81                 | 70        | 5.91    |
| December  | 30.07                                 | 29.86 | 29.99  | 29.91  | 90           | 67   | 87        | 70   | 79           | 85     | 75   | 77   | 80                 | 67        | 3.57    |
| YEAR      | 30.06                                 | 29.85 | 29.98  | 29.91  | 90           | 68   | 87        | 70   | 80           | 85     | 75   | 77   | 75                 | 64        | 68.29   |

Highest Barometer Reading (corrected): 30.11 in. on 9th February and 7th March.  
 Lowest " " 29.70 " " 12th October.  
 Highest maximum temperature: 93° F. " 30th and 31st May, 1st, 2nd, 5th, 9th and 16th June.  
 Lowest minimum " 63° F. " 18th February.  
 Greatest rainfall in 24 hours: 2.90 in. " 9th August.

RAINFALL AT THE BOTANIC GARDENS, DOMINICA, 1920-1939.

|             | 1920. | 1921. | 1922. | 1923. | 1924. | 1925. | 1926. | 1927. | 1928. | 1929. | 1930. | 1931. | 1932. | 1933. | 1934. | 1935. | 1936. | 1937. | 1938.  | 1939. | Monthly<br>Mean<br>Rainfall. |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|------------------------------|
| January ... | 7.54  | 6.82  | 6.50  | 3.82  | 6.25  | 7.88  | 3.68  | 5.50  | 6.60  | 5.18  | 10.65 | 1.47  | 5.47  | 7.30  | 4.81  | 2.37  | 3.46  | 13.24 | 6.73   | 4.13  | 5.97                         |
| February .. | 4.76  | 1.02  | 4.30  | 2.30  | 1.90  | 1.95  | 2.46  | 4.50  | 4.25  | 3.13  | 2.07  | 1.05  | 1.57  | 2.13  | 1.70  | 1.59  | 2.50  | 3.40  | 1.43   | 2.84  | 2.54                         |
| March ...   | 3.80  | 4.46  | 2.80  | 3.46  | .66   | 3.50  | .96   | 5.37  | 6.30  | 7.36  | 3.89  | .59   | 1.56  | 2.37  | 3.36  | 6.90  | .82   | 1.34  | 2.69   | 4.38  | 3.32                         |
| April ..    | .22   | 3.06  | 2.26  | 3.77  | 1.46  | .40   | 2.77  | 4.67  | 4.16  | 1.27  | 5.01  | .51   | 2.33  | 2.03  | 2.91  | 1.45  | 3.04  | 2.61  | .72    | 5.62  | 2.51                         |
| May ...     | 2.38  | 1.54  | 2.64  | .13   | 3.18  | 2.76  | 2.44  | 6.69  | 2.25  | 2.80  | 2.21  | 1.70  | 5.07  | 2.26  | 3.82  | 4.27  | 2.34  | 1.48  | 1.41   | .86   | 2.61                         |
| June ...    | 3.48  | 1.96  | 7.14  | 4.18  | 4.42  | 5.80  | 5.76  | 15.03 | 6.68  | 10.87 | 7.32  | 9.98  | 10.72 | 7.05  | 2.59  | 5.04  | 6.47  | 6.57  | 19.56  | 4.90  | 7.27                         |
| July ...    | 12.08 | 11.18 | 6.08  | 8.20  | 13.64 | 6.23  | 10.14 | 9.61  | 6.58  | 13.13 | 7.90  | 18.45 | 8.05  | 12.30 | 9.54  | 13.47 | 18.48 | 5.60  | 13.44  | 7.18  | 10.56                        |
| August ...  | 8.76  | 9.30  | 9.26  | 11.44 | 11.28 | 13.88 | 10.10 | 4.65  | 12.80 | 12.55 | 6.76  | 17.44 | 7.23  | 7.94  | 7.61  | 8.87  | 10.38 | 6.20  | 27.92  | 6.96  | 10.56                        |
| September.  | 8.60  | 6.28  | 10.68 | 4.28  | 4.88  | 9.12  | 4.12  | 6.20  | 8.10  | 5.63  | 14.66 | 13.51 | 6.13  | 11.51 | 4.08  | 12.93 | 11.14 | 4.40  | 10.77  | 6.52  | 8.22                         |
| October ... | 12.60 | 9.41  | 2.68  | 9.84  | 10.98 | 12.55 | 5.86  | 8.84  | 4.35  | 12.19 | 3.15  | 9.71  | 6.72  | 9.26  | 3.89  | 5.43  | 7.65  | 3.74  | 4.48   | 15.42 | 7.93                         |
| November.   | 4.62  | 2.44  | 3.00  | 1.06  | 6.86  | 9.60  | 7.54  | 8.70  | 7.93  | 14.39 | 5.51  | 11.90 | 13.83 | 11.04 | 5.58  | 3.39  | 12.14 | 20.85 | 12.34  | 5.91  | 8.43                         |
| December .  | 5.62  | 4.22  | 6.90  | 1.92  | 13.65 | 2.02  | 3.75  | 1.37  | 5.38  | 8.48  | 3.66  | 7.56  | 5.21  | 7.03  | 9.46  | 6.24  | 10.84 | 5.43  | 6.14   | 3.57  | 5.92                         |
| Total ...   | 74.46 | 61.72 | 64.24 | 54.40 | 79.16 | 75.69 | 59.58 | 81.13 | 75.38 | 96.98 | 72.79 | 93.87 | 73.89 | 82.22 | 59.35 | 71.95 | 89.26 | 74.86 | 107.63 | 68.29 | -                            |

Average year = 75.84 inches.

## APPENDIX III.

## RAINFALL RETURNS, DOMINICA, 1939.

| STATIONS.                   | JAN.  | FEB.  | MARCH. | APRIL. | MAY.  | JUNE. | JULY. | AUGUST. | SEPT. | OCTOBER. | NOV.  | DEC.  | TOTALS. |
|-----------------------------|-------|-------|--------|--------|-------|-------|-------|---------|-------|----------|-------|-------|---------|
| 1. Bell Hall<br>L ...       | 4.25  | 3.42  | 2.60   | 7.17   | 1.94  | 4.94  | 5.14  | 9.53    | 6.14  | 9.85     | 2.53  | 3.81  | 61.32   |
| 2. Botanic Gardens<br>L ... | 4.13  | 2.84  | 4.38   | 5.62   | .86   | 4.90  | 7.18  | 6.96    | 6.52  | 15.42    | 5.91  | 3.57  | 68.29   |
| 3. Bath<br>L ...            | 3.75  | 2.02  | 5.35   | 5.16   | .86   | 5.31  | 7.21  | 7.47    | 6.24  | 14.65    | 6.29  | 3.31  | 67.62   |
| 4. Blenheim<br>LAS.         | 4.24  | 4.55  | 4.92   | 7.53   | 5.09  | 6.77  | 7.48  | 6.78    | 5.63  | 12.57    | 6.88  | 7.43  | 79.87   |
| 5. Canefield<br>L ...       | 2.57  | 2.32  | 2.83   | 5.92   | 1.13  | 5.06  | 8.47  | 5.70    | 6.00  | 13.86    | 7.84  | 3.09  | 64.79   |
| 6. Clark Hall<br>L ...      | 1.00  | 6.83  | 4.62   | 9.10   | 1.25  | 5.10  | 6.67  | 9.23    | 9.08  | 21.42    | 9.10  | 1.92  | 85.32   |
| 7. Copt Hall<br>L ...       | 9.82  | 4.97  | 7.83   | 13.34  | 3.50  | 8.95  | 10.59 | 12.41   | 10.28 | 24.28    | 11.53 | 3.74  | 121.24  |
| 8. Governor<br>W ...        | 5.89  | 5.70  | 8.04   | 10.32  | 10.24 | 11.91 | 9.15  | 11.66   | 10.68 | 11.88    | 9.28  | 7.64  | 112.39  |
| 9. Hampstead<br>LAS.        | 3.27  | 3.37  | 4.20   | 4.43   | 2.75  | 6.88  | 6.28  | 7.27    | 6.13  | 9.66     | 5.35  | 5.44  | 65.03   |
| 10. Morne Bruce<br>L ...    | 4.32  | 3.16  | 4.76   | 5.97   | 1.04  | 5.60  | 7.85  | 7.63    | 6.97  | 16.16    | 6.69  | 4.11  | 74.26   |
| 11. Moore Park<br>L ...     | 4.57  | 4.53  | 4.39   | 6.14   | 4.60  | 6.45  | 6.00  | 6.20    | 5.58  | 10.45    | 6.09  | 7.00  | 72.00   |
| 12. Picard<br>L ...         | 5.37  | 4.23  | 5.93   | 6.69   | 2.47  | 6.92  | 7.22  | 6.31    | 10.16 | 14.42    | 3.53  | 6.99  | 80.24   |
| 13. Pte. Mulâtre<br>W ...   | 3.75  | 5.56  | 5.26   | 5.95   | 4.38  | 5.28  | 8.07  | 11.28   | 8.06  | 31.61    | 7.90  | 5.33  | 102.43  |
| 14. Rosalie<br>W ...        | 3.50  | 3.80  | 5.74   | 11.15  | 5.10  | 7.50  | 8.52  | 10.20   | 7.30  | 17.78    | 26.68 | 7.23  | 114.50  |
| 15. Ridgfield<br>L ...      | 9.58  | 4.96  | 7.01   | 13.69  | 3.18  | 8.45  | 9.01  | 10.78   | 8.31  | 22.10    | 12.84 | 6.91  | 116.82  |
| 16. Shawford<br>I ...       | 22.25 | 11.03 | 8.31   | 17.60  | 6.67  | 24.83 | 12.60 | 16.46   | 14.71 | 27.20    | 26.58 | 15.43 | 203.67  |
| 17. Sherwood<br>I ...       | 15.60 | 8.05  | 11.80  | 22.85  | 7.20  | 14.75 | 13.15 | 14.15   | 16.00 | 23.20    | 11.45 | 11.70 | 169.90  |
| 18. Stowe<br>W ...          | 5.60  | 4.86  | 7.58   | 6.58   | 3.10  | 4.81  | 7.17  | 12.93   | 8.72  | 19.95    | 10.94 | 5.54  | 97.78   |

Mean Rainfall 18 Stations ... 97.64 inches.

9 Leeward Stations... 82.21 "

4 Windward " 106.77 "

3 Inland " 148.52 "

2 Lasoye " 72.45 "









